

REMARKS

Claims 1-8 and 13-24 are all of the claims pending in the present Application. Claims 6-8 and 19-20 have been withdrawn. Claims 1-7 and 13-20 have been amended. Claims 9-12 have been canceled. Claims 21-24 have been added.

It is noted that the new claims are presented only for the purpose of more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-4 and 13-16 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Masashi (JP 10-236826).

Claims 5 and 15 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Masashi in view of Okada et al. (US Patent Pub. No. 2003/0162090).

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

An exemplary embodiment of the claimed invention, as set forth in independent claim 1, is directed to a positive active material including base particles able to dope and release lithium ions, and at least one element selected from the group consisting of Gd, La, Ce and Yb on at least part of a part of the base particles which is able to come into contact with an electrolyte. (Application at [0037]).

Conventional positive active materials include base particles (e.g., LiCoO₂). However, such conventional positive active materials react with an electrolyte in a battery, causing a performance of the battery to deteriorate over time (Application at [0016]).

The claimed invention, on the other hand, includes at least one element selected from the group consisting of Gd, La, Ce and Yb on at least part of a part of the base particles which is able

to come into contact with an electrolyte (Application at [0037]). This feature may help to inhibit a reaction between the electrolyte and the positive active material and, thus, inhibit a deterioration of performance of a battery (Application at [0121]).

II. THE ALLEGED PRIOR ART REFERENCES

A. Masashi

The Examiner alleges that Masashi teaches the invention of claims 1-4 and 13-16. However, Applicant respectfully submits that there are features of the claimed invention which are not taught or suggested by Masashi.

In particular, Applicant submits that Masashi does not teach or suggest "*at least one element selected from the group consisting of Gd, La, Ce and Yb on at least part of a part of the base particles which is able to come into contact with an electrolyte*", as recited in claim 1 (Application at [0037]). As noted above, this feature may help to inhibit a reaction between the electrolyte and the positive active material and, thus, inhibit a deterioration of performance of a battery (Application at [0121]).

Clearly, Masashi does not disclose or suggest these features.

Indeed, the Examiner attempts to rely on paragraphs [0012] and [0017] in Masashi to support his position. This is clearly unreasonable.

In fact, these passages in Masashi teach simply a "two-layer structure particle state" including a surface layer having a general formula of $\text{Li}_q\text{Co}_{1-a}\text{Z}_a\text{O}_b$ where Z may include, for example, B, Sc, Y and Cu. That is, nowhere in these passages does Masashi teach or suggest at least one element selected from the group consisting of Gd, La, Ce and Yb on at least part of a part of the base particles which is able to come into contact with an electrolyte, as in the claimed invention.

Indeed, Applicant would point out that Masashi teaches that the surface layer may include aluminum (e.g., $\text{Li}_q\text{Co}_{1-a}\text{Z}_a\text{O}_b$ where Z may include aluminum). However, as described in the present Application (e.g., see [0123]), aluminum deteriorates the performance, as compared to a blank. Therefore, it is clear that Masashi clearly does not contemplate the claimed invention.

Therefore, Applicant respectfully submits that Masashi does not teach or suggest each and every feature of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

B. Okada

The Examiner alleges that Masashi would have been combined with Okada to form the invention of claims 5 and 15. However, Applicant respectfully submits that these alleged references would not have been combined and even if combined, the alleged combination would not teach the features of the claimed invention.

In particular, Applicant respectfully submits that these references are unrelated. Indeed, no person of ordinary skill in the art would have considered combining these disparate references, absent impermissible hindsight.

In fact, Applicant submits that the references provide no motivation or suggestion to urge the combination as alleged by the Examiner. Indeed, these references clearly do not teach or suggest their combination. Therefore, Applicant respectfully submits that one of ordinary skill in the art would not have been so motivated to combine the references as alleged by the Examiner. Therefore, the Examiner has failed to make a prima facie case of obviousness.

Moreover, neither Masashi, nor Okada, nor any alleged combination thereof teaches or suggests "*at least one element selected from the group consisting of Gd, La, Ce and Yb on at least part of a part of the base particles which is able to come into contact with an electrolyte*", as recited in claim 1 (Application at [0037]). As noted above, this feature may help to inhibit a reaction between the electrolyte and the positive active material and, thus, inhibit a deterioration of performance of a battery (Application at [0121]).

Clearly, Okada does not disclose or suggest these features.

Indeed, the Examiner attempts to rely on paragraph [0035] in Okada to support his position. This is clearly unreasonable.

Indeed, Okada teaches simply that composite chalcogen compounds are capable of doping and undoping an alkali metal ion (Okada at [0035]). Moreover, Okada teaches that a

"coating material for active material comprises a compound containing aluminum and oxygen" (Okada at [0015]). Therefore, it is clear that Okada, like Masashi, clearly does not contemplate the claimed invention.

Thus, like Masashi, nowhere does Okada teach or suggest at least one element selected from the group consisting of Gd, La, Ce and Yb on at least part of a part of the base particles which is able to come into contact with an electrolyte, as in the claimed invention. Therefore, Okada clearly does not make up for the deficiencies of Masashi.

Therefore, Applicant respectfully submits that these alleged references would not have been combined and even if combined, the combination would not teach or suggest each and every feature of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicants submit that claims 1-8 and 13-24, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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